

B. A. STOWE.
 HOLDER FOR LAMP SHADES AND THE LIKE.
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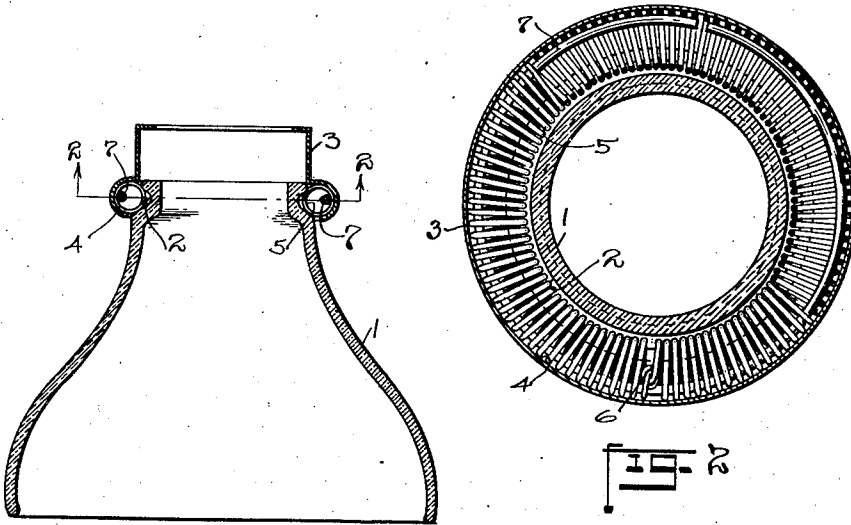


Fig. 1

Fig. 2

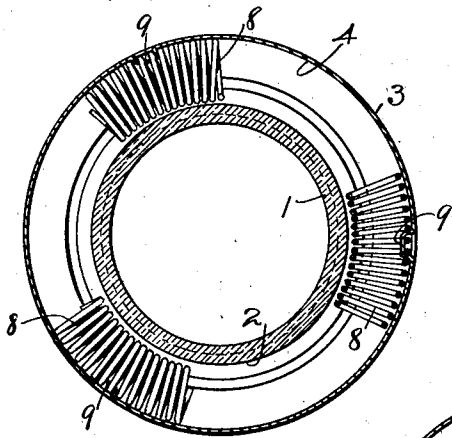


Fig. 4

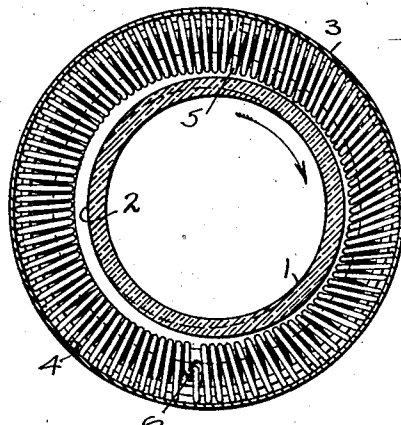


Fig. 3

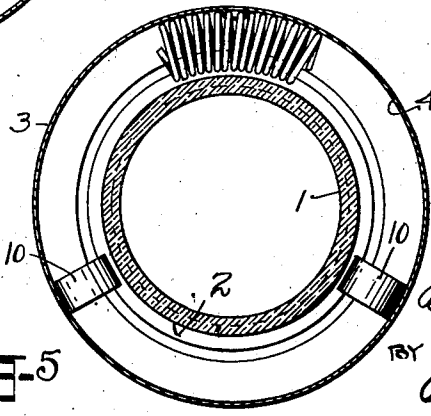


Fig. 5

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HOLDER FOR LAMP-SHADES AND THE LIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BERNARD A. STOWE, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Holders for Lamp-Shades and the Like, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

The present invention relating, as indicated, to shade holders and the like, has more particular regard to the adaptation of coiled or helical springs for use in such holders to detachably secure the shade or other similar member in place therein. I am aware that it has been attempted heretofore to utilize springs of this kind by arranging the same to encircle the neck or flange on the shade and resiliently engage with the same, but as more particularly set forth in the following description and claims, the present invention accomplishes results not heretofore secured, such results including the positive locking of the shade to the holder against movement longitudinally of the axis of the holder, while still enabling the shade to be disengaged by a very simple movement. The symmetrical location of the shade with respect to the axis of the holder is furthermore insured by the improvements in question.

The annexed drawing and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting, however, but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawing:—Figure 1 is a central vertical section through a holder of my present improved construction showing a lamp shade as secured therein; Fig. 2 is a transverse section of said holder and shade taken on the plane indicated by the line 2—2, Fig. 1, but on a larger scale; Fig. 3 is a view similar to Fig. 2, but showing the manner in which the shade may be disengaged from the holder; Fig. 4 is a transverse sectional view illustrating a modification in the construction of the holder; while Fig. 5 similarly illustrates another modification in such construction.

While my improved holder is referred to as a holder for lamp shades, and this will

be probably its chief field of use, I desire it to be understood that it is not necessarily limited to this particular field, for it is obviously adaptable for use in various connections where it is desired to detachably secure a member, such as a shade, to a holder or socket. Accordingly, the shade 1 in the several figures of the drawing is merely typical of the member to be held, such member being provided for the purpose of securing it to the holder with an encircling groove 2 near one end, more or less similar to the grooves commonly found in articles of this class. Similarly, the holder 3, which is of familiar tubular form, may assume various ornamental shapes, or be incorporated in various fixtures without losing its identity so far as its present function is concerned. Such tubular holder 3 is provided, in the specific construction shown in Figs. 1, 2 and 3, with an annular recess 4 on its inner face, in which is held a coiled or helical spring 5 that extends entirely around the holder and has its free ends secured together, as indicated at 6. To more securely retain this spring in the seat thus provided for it, a section 7 of spring wire is bent and inserted within the coils or convolutions of said spring, as clearly shown in Fig. 2, the effect of which is to press the convolutions of the latter into the recess provided for its reception in the holder, and to normally fixedly secure such convolutions around the outside edge of the coil to the holder. The internal diameter of the coil, when thus secured to the holder, and the diameter, or thickness, of the convolutions of said coil are so related to the diameter of the grooved end or neck of the shade and to the distance between the edges of the groove in said shade, that in the assembled condition of parts illustrated in Figs. 1 and 2, such convolutions of the spring lie in a substantially radial position. The transverse curvature of the groove 2 in the shade, moreover, is made such that the coils are free to assume such radial position without more than engaging the bottom of the groove; preferably as shown in the drawings the groove is deeper than the coil, so that the latter engages only the edges of the groove. In this position of the coils, it will be obvious that the shade is securely locked against movement longitudinally of the axis of the holder, or, in other words, transversely of the spring

as a whole, since the several convolutions are substantially incompressible and act as so many radially disposed rings. (See Figs. 1 and 2.) By a relative twisting and turning movement of the holder and shade, however, combined with pressure exerted toward one side or the other, the convolutions of the spring affected by such pressure and twisting movement are caused to assume an oblique position as shown at the right in Fig. 3, with a resulting enlargement of the inner transverse diameter of the spring coil, whereby a limited lateral displacement of the shade with respect to the holder is permitted. The diameter of the convolutions, or the thickness of the spring coil, is so gaged that the amount of this displacement will be sufficient to permit of the disengagement of the opposite side of the shade from the adjacent convolutions of the spring, as shown in the same Fig. 2. Accordingly, by tilting the shade, it may be entirely disengaged by this simple movement from the holder. In order to insert such shade, it is tilted and one edge of its grooved end is pressed against one inner side of the spring in the holder to force the corresponding convolutions of such spring into the oblique position just described, whereupon the shade may be brought to a vertical position, that is, into proper axial alinement with the holder. The opposite edge of the shade to that first brought into engagement with the spring may now be slipped into place in a manner reverse to that just described for the removal of the shade. Immediately upon relieving the pressure, all the convolutions of the spring assume their normal position in which the holder is securely locked, as above described.

The ease of manipulation of my improved holder need not be further referred to, but attention is directed to the locking characteristic of the device, there being no reliance placed on the resilience of the spring, as in previous devices wherein it has been attempted to employ springs of this kind in shade holders. Moreover, the shade is accurately centered in the holder, thus further distinguishing this from the case where the resiliency of the spring is relied on, since the coils, when left standing obliquely in final engaging position, will not stand at uniform angles of obliquity entirely around the circle, but will displace the shade to one side or the other. This is a very serious matter where economical and satisfactory illumination is desired, since the shade should be carefully located in exact axial alinement with respect to the source of light which it incloses.

In Fig. 4, a modification is illustrated consisting in the utilization of several detached coiled springs 8, instead of a complete spring extending entirely around the

inner wall of the holder. These several sections are secured to the holder by clips or loops 9 into which they are threaded, or they may be otherwise attached, as found most convenient, no retaining spring 7 being here necessary. The operation of inserting and removing the shade, where the construction of Fig. 4 is employed, is exactly the same as in the case of the first described construction.

In Fig. 5, only one such coiled spring member 8 is utilized, the place of the two others found in Fig. 4 being taken by simply circular lugs or rings 10 of substantially the diameter of the spring, and designed to fit into the groove 2 in the neck or flange of the shade, in exactly the same fashion as the spring or spring sections in the previously described constructions.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a device of the character described, the combination with a member to be held, said member being provided with an encircling groove; of a tubular holder adapted to receive such grooved member, and a coiled spring transversely disposed and fixedly secured at its outer edge to the inner wall of said holder, the convolutions of said spring normally extending inwardly in a radial direction into the space occupied by said member when in place so as to be adapted to engage the groove therein and lock said member against movement in a longitudinal direction, such convolutions, however, assuming an oblique position upon said member being pressed thereagainst and given a relative twisting movement, whereby said member may be displaced in a lateral direction, substantially as described.

2. In a device of the character described, the combination with a member to be held, said member being provided with an encircling groove near one end; of a tubular holder adapted to receive such grooved end of said member; and a coiled spring extending around and fixedly secured about its outer edge to the inner wall of said holder, the convolutions of said spring normally extending inwardly in a radial direction into the space occupied by said member when in place so as to be adapted to engage the groove and lock said member against movement in a longitudinal direction, such convolutions, however, being free to assume an oblique position upon one side of said member being pressed thereagainst and said member being given a relative twisting

movement, whereby said member may be displaced in a lateral direction sufficiently to disengage its opposite side from said spring, substantially as described.

5 3. In a device of the character described, the combination with a member to be held, said member being provided with an encircling groove near one end; of a tubular holder adapted to receive such grooved end
10 of said member and having a groove extending around its inner wall; a coiled spring lying in the groove in said holder; and a bent spring wire inserted within said coiled spring and fixedly securing the con-
15 volutions of the latter around the outside edge of the coil to such holder-groove, such convolutions normally extending inwardly in a radial direction into the space occupied by said member when in place so as to be
20 adapted to engage the groove therein and lock said member against movement in a longitudinal direction, such convolutions, however, being free to assume an oblique position upon one side of said member be-
25 ing pressed thereagainst and said member being given a relative twisting movement, whereby said member may be displaced in a lateral direction sufficiently to disengage
30 its opposite side from said spring, substantially as described.

4. In a device of the character described, the combination of a tubular holder adapted to receive a member provided with an encircling groove; and a coiled spring trans-
35 versely disposed and fixedly secured at its outer edge to the inner wall of said holder, the convolutions of said spring normally ex-

tending inwardly in a radial direction into the space occupied by said member when in place so as to be adapted to engage the
40 groove therein and lock said member against movement in a longitudinal direction, such convolutions, however, assuming an oblique position upon said member being pressed
45 thereagainst and given a relative twisting movement, whereby said member may be displaced in a lateral direction, substantially as described.

5. In a device of the character described, the combination of a tubular holder adapted
50 to receive a member provided with an encircling groove; and a coiled spring extending around and fixedly secured about its outer edge to the inner wall of said holder, the convolutions of said spring normally ex-
55 tending inwardly in a radial direction into the space occupied by said member when in place so as to be adapted to engage the groove therein and lock said member against
60 movement in a longitudinal direction, such convolutions, however, being free to assume an oblique position upon one side of said member being pressed thereagainst and said
65 member being given a relative twisting movement, whereby said member may be displaced in a lateral direction sufficiently to disengage its opposite side from said
spring, substantially as described.

Signed by me this 12 day of April, 1912.

BERNARD A. STOWE.

Attested by—

H. M. McKOUGH,
D. H. KELLY.